

CLAIMS

1. A method for achieving wireless communications in a network having at least one macro cell for communicating both voice and data with a mobile communications device across a first wireless link and, at least one micro cell, with a smaller coverage area and higher capacity per user than the macro cell, for communicating data with the mobile communications device across a second wireless communication link, the method comprising the steps of:
communicating signaling information between the one micro cell and the one macro cell via a third wireless channel in response access of the micro cell by the mobile communications device; and
controlling the operation of the micro cell responsive to the signaling information.

2. The method according to claim 1 wherein step of controlling the micro cell includes the step of managing access to the micro cell by the mobile communications device.

3. The method according to claim 1 wherein the step of communicating signaling information via the third wireless channel includes the step communicating signaling information from each mobile communication device separately.

4. The method according to claim 1 wherein the step of communicating signaling information via the third wireless channel includes the step of encapsulating signaling information from a plurality of mobile communication devices in a common packet.

5. The method according to claim 1 further comprising the step of assigning to the mobile communication device codes and power settings to enable the mobile communication device to communicate with macro cell and micro cell simultaneously.

6. A wireless communications system, comprising:
at least one macro cell for communicating both voice and data with a mobile communications device across a first wireless link
at least one micro cell having a smaller coverage area and higher capacity per user than the macro cell for communicating data with the mobile communications device across a second wireless communication link;

- 8 -

7 a control element for controlling at least the operation of the macro cell;
8 a third wireless channel for communicating signaling information between the one micro
9 cell and the one macro cell via in response access of the micro cell by the mobile
10 communications device to enable the controller to also control the operation of the macro cell.

1 7. The system according to claim 6 wherein the control element comprises a Serving
2 General Packet Radio Service Node (SGSN).

1 8. The system according to claim 6 wherein the control element manages access to
2 the micro cell by the mobile communications device.

1 9. The system according to claim 6 wherein each micro cell separately
2 communicates signaling information from each mobile communication device across the third
3 wireless channel.

1 10. The system according to claim 6 wherein the signaling information of each of a
2 plurality of micro cells is encapsulated into a common packet for communication across the third
3 wireless communication channel.

1 11. The system according to claim 6 wherein the control element assigns to the
2 mobile communication device codes and power settings to enable the mobile communication
3 device to communicate with macro cell and micro cell simultaneously.

1 12. The system according to claim 7 wherein the control element further comprises:
2 a Gateway General Packet Radio Service Serving Node (GGSN); and
3 an Internet Protocol tunnel for linking the GGSN to an Internet Protocol gateway.